

## CLAIMS

1. A polishing apparatus comprising:
  - a polishing surface;
  - 5 a top ring for holding a workpiece to be polished; and
  - a top ring shaft for pressing said top ring against said polishing surface, said top ring including:
    - a retainer ring for holding a peripheral edge portion of the workpiece,
- 10 a housing substantially in a form of a disk, said housing being connected to said top ring shaft, and
  - a sliding contact joint interconnecting said retainer ring and said housing in a state such that said retainer ring and said housing are brought into sliding contact with each other.
- 15 2. The polishing apparatus as recited in claim 1, wherein said sliding contact joint comprises a free joint to bring said retainer ring and said housing into sliding contact with each other.
- 20 3. The polishing apparatus as recited in claim 2, wherein said free joint comprises a ball joint.
4. A polishing apparatus comprising:
  - a polishing surface;
  - 25 a top ring for holding a workpiece to be polished; and
  - a top ring shaft for pressing said top ring against said polishing surface, said top ring including:
    - a retainer ring for holding a peripheral edge portion of the

workpiece,

a housing substantially in a form of a disk, said housing being connected to said top ring shaft, and

5 a joint interconnecting said retainer ring and said housing, said joint having a sufficient high rigidity in horizontal and vertical directions and a low flexural rigidity.

5. The polishing apparatus as recited in claim 4, wherein said joint is disposed outside of a center of a radial width of said retainer ring.

10

6. The polishing apparatus as recited in claim 4, wherein said joint has a cross-section constricted at a vertically central portion thereof.

15

7. A polishing apparatus comprising:

a polishing surface;

a top ring for holding a workpiece to be polished; and

a top ring shaft for pressing said top ring against said polishing surface, said top ring including:

20

a retainer ring for holding a peripheral edge portion of the

workpiece, and

a housing substantially in a form of a disk, said housing being connected to said top ring shaft,

25

wherein a rigidity of said housing is increased so that an inclination of a lower surface of said retainer ring is reduced with respect to said polishing surface when said top ring is pressed against said polishing surface.

8. A polishing apparatus comprising:

a polishing surface; and

a top ring for holding a workpiece to be polished, said top ring including a retainer ring for holding a peripheral edge portion of the workpiece,

wherein said retainer ring includes:

5                   a first ring member made of resin;  
                  a second ring member made of metal or ceramic; and  
                  a fastening tool for fastening said first ring member and said second ring member in a manner such that said first ring member and said second ring member can be detached as two layers in a vertical direction.

10

9. The polishing apparatus as recited in claim 8, wherein said first ring member is brought into contact with said polishing surface.

15                   10. The polishing apparatus as recited in claim 9, wherein said first ring member includes particles serving as abrasive particles when said first ring member is scraped.

20                   11. The polishing apparatus as recited in claim 8, wherein said retainer ring further includes an engagement portion to fit said first ring member and said second ring member into each other.

12. The polishing apparatus as recited in claim 8, wherein said retainer ring is configured such that said retainer ring can be regenerated merely by replacement of said first ring member.

25

13. The polishing apparatus as recited in claim 8, where said fastening tool comprises a bolt.

14. A retainer ring for holding a peripheral edge portion of a workpiece to be polished in a top ring for pressing the workpiece against a polishing surface and bringing the workpiece into sliding contact with the polishing surface, said retainer ring comprising:

- 5        a first ring member made of resin;
- a second ring member made of metal or ceramic; and
- a fastening tool for fastening said first ring member and said second ring member in a manner such that said first ring member and said second ring member can be detached as two layers in a vertical direction.

10